Athlete Performance Identification System - Product Backlog (Detailed & Explained)

Product Backlog Summary

ID	User Story	Priority	Sprint	Duration
A1	Athlete Profile Creation	High	Sprint 1	Week 1–2
A2	Edit & Manage Athlete Profile	High	Sprint 1	Week 1–2
C1	Coach Performance Logging	High	Sprint 1	Week 1–2
S1	Secure Authentication System	High	Sprint 1	Week 1–2
S2	Cloud Database Integration	High	Sprint 1	Week 1–2
A3	Upload Achievements & Media	High	Sprint 2	Week 3–4
C2	Edit Athlete Data & Add Notes	Medium	Sprint 2	Week 3–4
C3	Search & Filter Athletes	Medium	Sprint 2	Week 3–4
F1	Federation Data Dashboard	Medium	Sprint 2	Week 3–4
A4	View Performance Progress	Medium	Sprint 2	Week 3–4
A5	Offline Data Access	Medium	Sprint 3	Week 5–6
A6	Athlete Notifications	Medium	Sprint 3	Week 5–6
C4	Compare Athlete Performance	Low	Sprint 3	Week 5–6
C5	Coach–Athlete Communication	Medium	Sprint 3	Week 5–6
F2	Federation Report Generation	Low	Sprint 3	Week 5–6
S3	Sync & Offline Error Handling	Medium	Sprint 3	Week 5–6
E1	AI Talent Recommendation	Low	Sprint 3	Week 5–6
E2	Gamified Achievements	Low	Sprint 3	Week 5–6
E3	Fitness Device Integration	Low	Sprint 3	Week 5–6
E4	Offline Notification Queue	Low	Sprint 3	Week 5–6

Detailed Functional Backlog

Each story contains: - Story description - Detailed requirements - Explanation for viva/understanding

A1 – Athlete Profile Creation

User Story: As an athlete, I want to create a verified profile so that I can register myself.

Requirements: Fields: Full Name, Sport, Date of Birth, Age, Gender, District, Contact, Email, Password; Verification: ID upload; Mandatory field validation.

Explanation: Allows verified athlete identification and prevents duplicate profiles.

A2 – Edit & Manage Athlete Profile

User Story: As an athlete, I want to edit my details.

Requirements: Editable fields: Contact, Address, Club, Profile Photo; Auto-sync; Access restriction.

Explanation: Keeps profile current for accurate records.

C1 – Coach Performance Logging

User Story: As a coach, I want to log athlete performance.

Requirements: Fields: Athlete Name, Event, Date, Sport, Result, Unit, Location, Session Type, Conditions, Notes; Validation: Event Date ≤ today; Cloud storage; Media upload.

Explanation: Digital logging replaces paper records, ensuring accurate tracking.

S1 – Secure Authentication System

User Story: As a user, I want secure login.

Requirements: Role-based login; Password hashing; Token-based session; Email verification.

Explanation: Protects sensitive data and limits access based on role.

S2 – Cloud Database Integration

User Story: As a developer, I want cloud database.

Requirements: Firebase/SQL; Real-time sync; Auto-backups; Encryption.
Explanation: Ensures reliability, scalability, and secure access.

A3 – Upload Achievements & Media

User Story: As an athlete, I want to upload my results.

Requirements: Fields: Event, Date, Sport, Location, Result, Position, Category, Coach Verifier; Upload files (PDF, Image, Video); Verification; Validation: Event Date ≤ today.
Explanation: Enables verification and recognition of athlete achievements.

A4 – View Performance Progress

User Story: As an athlete, I want visual charts.

Requirements: Fetch data; Graphs (line/bar); Filters by sport/year/event; Highlight personal bests.

Explanation: Shows progress trends and motivates improvement.

C2 – Edit Athlete Data & Add Notes

User Story: As a coach, I want to update performance. **Requirements:** Editable fields: Result, Notes, Event Date, Location; Edit history; Notify athlete. **Explanation:** Maintains accurate records and traceable updates.

C3 – Search & Filter Athletes

User Story: As a coach, I want search & filter. **Requirements:** Filters: Sport, Age, District, Gender, Performance; Sort: Best result, Recent, Alphabetical. **Explanation:** Simplifies navigation through large athlete pools.

F1 – Federation Data Dashboard

User Story: As federation official, I want aggregated data.

Requirements: View totals by sport/region; Average results; Export CSV/PDF; Role restriction.

Explanation: Helps evaluate performance across regions for talent identification.

A5 – Offline Data Access

User Story: As an athlete, I want offline mode.

Requirements: Local cache (SQLite); Auto-sync; Offline mode indicator.

Explanation: Ensures data entry continuity without internet.

A6 – Athlete Notifications

User Story: As an athlete, I want alerts.

Requirements: In-app + SMS; Multilingual; Customizable settings.

Explanation: Keeps athletes informed of updates and feedback.

C4 – Compare Athlete Performance

User Story: As a coach, I want side-by-side comparison.

Requirements: Select athletes; Graphs; Export PDF.

Explanation: Supports selection and evaluation decisions.

C5 – Coach–Athlete Communication

User Story: As a coach, I want messaging.

 Requirements: In-app chat; Attachments; Read receipts.

Explanation: Provides direct feedback and guidance.

F2 – Federation Report Generation

User Story: As a federation official, I want reports.

Requirements: Filter selection; Auto-generate charts; Export PDF with logo.
Explanation: Simplifies presentation and reporting.

S3 – Sync & Offline Error Handling

User Story: As a developer, I want safe sync.

Requirements: Retry logic; Error logs; Alert on repeated failure.

Explanation: Protects data during connectivity issues.

E1 – AI Talent Recommendation

User Story: As a federation user, I want AI suggestions.

Requirements: ML model; Rank athletes; Display top 5 per sport.

Explanation: Automates talent scouting efficiently.

E2 – Gamified Achievements

User Story: As an athlete, I want badges.

Requirements: Define badges; Display on profile; Notify on unlock.

 Explanation: Encourages motivation and engagement.

E3 – Fitness Device Integration

User Story: As an athlete, I want wearable sync.

Requirements: API integration (Fitbit, Garmin); Pull heart rate, distance; Manual approval.

Explanation: Provides automated performance tracking.

E4 – Offline Notification Queue

User Story: As a user, I want delayed notifications.

Requirements: Store locally; Auto-send on reconnection; SMS fallback.

Explanation: Ensures critical updates aren't missed.

End of Product Backlog